REMARKS

Favorable reconsideration of the subject application, as amended above, is respectfully requested in view of the comments below.

Claims 1-25 are pending in the subject application. Claims 14-25 have been withdrawn from consideration. Accordingly, claims 1-13 are presented for examination on the merits.

The specification has been amended to correct the wording of the claim for priority.

Applicant acknowledges finality of the restriction requirement.

I. Objection to the Specification

The specification is objected to for incorporating by reference allegedly essential material. This objection is respectfully traversed as follows.

The Examiner has not indicated how the incorporated material is essential to carrying out the claimed invention. However, it is noteworthy that the incorporated materials are set forth in an example which does not limit the myriad number of ways in which the invention can be carried out. For example, the incorporated materials refer to a strain of *Agrobacterium tumefaciens* that was used to generate protoplasts, but any strain of *Agrobacterium tumefaciens* may be used. The particular strain used in the example is not limiting, and is not essential to the claimed invention. The other incorporated references in paragraph 57 merely disclose the pCVE plasmid which was used to generate the vector for T-DNA tagging mutagenesis, but other plasmids may be used to the same end. T-DNA tagging is a well known methodology for activation mutagenesis, and the specification merely cites to the plasmid that was used in one example of the invention. The cited pCVE plasmid is not the only plasmid that can be used for

In The Drawings:

New replacement sheets are enclosed and replace the drawings originally filed in the application.

activation mutagenesis to generate protoplasts and therefore, the cited references do not disclose material that is essential to carrying out the claimed invention.

Accordingly, the objection to the specification is respectfully traversed.

II. Double Patenting

The Examiner states that claims 10 and 11 substantial duplicates of one another and upon allowance of one, the other will be objected to under 37 C.F.R. § 1.175.

It is respectfully pointed out to the Examiner that claim 10 is directed to use of nicotinic acetylcholine **agonist**, while claim 11 is directed to use of an **antagonist**. Thus, these claims are not duplicates of one another, and indeed, are directed to use of compounds whose actions are significantly different from each other. Accordingly, objection to these claims is improper.

III. Rejection of Claims Under 35 U.S.C. § 112, Second Paragraph

Claim 3 is rejected under 35 U.S.C. § 112, second paragraph as allegedly being indefinite. The Examiner asserts that the meaning of the term "regulatory gene" is unclear.

Applicant respectfully disagrees.

Enclosed herewith are copies of relevant pages of Molecular Biology of the Gene, 3rd. edition, which provide an art accepted definition of "regulatory genes." As can be seen, a regulatory gene functions to control the rate of synthesis of the products of other genes. One of skill in the art at the time of the invention would recognize the meaning of this term and therefore, understand the metes and bounds of the claimed invention. Accordingly, the rejection of claim 3 under 35 U.S.C. § 112, second paragraph is respectfully traversed.

IV. Rejection Under 35 U.S.C. § 102(b)

Claims 1-4 and 6-9 are rejected under 35 U.S.C. § 102(b) as being anticipated by Fritze *et al.* The Examiner asserts that the cited reference teaches each limitation of the claimed invention.

This rejection is respectfully traversed as follows.

The present invention is directed to a method for identifying plant genetic material whose actions cause increased production of a metabolite. In the present method, transformed calli are grown and sampled in a manner that retains their viability and provides cells for testing for the presence of the metabolite of interest and establishing a cell line and/or library. Thus, in the present invention, the presence or absence of a desired metabolite is established in the early stages of plant regeneration.

In contrast, the cited reference does not disclose sampling transformed calli such that the calli remain viable, nor does it disclose obtaining cells from the calli for further testing, and cell line development. Instead, the cited reference discloses that for genetic analysis, regenerated plants are selfed and/or cross-pollinated with wild-type pollen. The progeny are analyzed for segregation of the selective marker used in generation of the protoplasts. It is further disclosed that novel phenotypes are ideally detectable at the seedling level. Thus, Fritze *et al.*'s method requires regeneration of plants, crossing and analysis of seedlings, which are process steps eliminated by the present method.

Accordingly, the rejection of claims 1-4 and 6-9 under 35 U.S.C. § 102(b) is respectfully traversed.

V. Rejection of Claims Under 35 U.S.C. § 103(a)

Claim 5 is rejected under 35 U.S.C. § 103(a) as being unpatentably obvious over Fritze *et al.* in view of Browning *et al.* The Examiner relies on Fritze as above, and Browning et al. as teaching the use of radioligand displacement assay to detect opiates. The Examiner concludes, therefore, one of ordinary skill in the art would have had a reasonable expectation of success in applying the radioligand displacement assay to Fritze *et al.*'s method.

This rejection is respectfully traversed as follows.

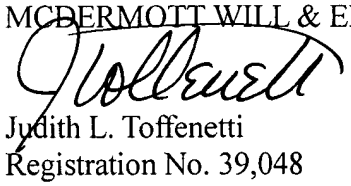
As discussed above, the method taught by Fritze *et al.* requires propagation of plants, cross-breeding and seed testing. Thus, even if Fritze's method were modified by use of Browning *et al.*'s radiolaigand displacement assay, the result would not be the present invention, nor would it render the present invention obvious. Fritze *et al.* teaches a labor intensive method of propagating plants and cross-breeding or selfing for genetic analysis, while the present invention eliminates these steps. There is no teaching in Fritze *et al.* or in the secondary reference that suggests undertaking genetic analysis of calli without disrupting their growth and viability. As such, the present invention is not obvious over the cited combination of prior art.

Accordingly, the rejection of claim 5 under 35 U.S.C. § 103(a) over Fritze et al and browning *et al.* is respectfully traversed.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

MCDERMOTT WILL & EMERY LLP



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Protamines	A class of proteins rich in the basic amino acid arginine. They are found complexed to the DNA of the sperm of many invertebrates and fish.
Provirus	The state of a virus in which it is integrated into a host cell chromosome and is thus transmitted from one cell generation to another.
Puffs	Open loops, like those of lambrush chromosomes, found in polytene chromosomes. The larger and more diffuse their appearance, the higher the rate of transcription.
Pulse-Chase Experiment	A radioactively labeled compound is added to living cells or a cell extract (pulse) and, a short time later (e.g., five seconds), an excess of unlabeled compound is added to dilute out the "hot" compound. Samples are then taken at periods after the pulse to follow the course of the label as the compound is metabolized (chase).
Puromycin	Antibiotic that inhibits polypeptide synthesis by competing with amino-acyl tRNA's for ribosomal binding site "A."
Radioactive Isotope	An isotope with an unstable nucleus that stabilizes itself by emitting ionizing radiation.
Reading Mistake	The incorrect placement of an amino acid residue in a polypeptide chain during protein synthesis.
Recessive	An allele which exerts its phenotypic effect only when present in homozygous form, being otherwise masked by the dominant allele.
Recombination	The appearance in the offspring of traits that were not found together in either of the parents.
Regulatory Genes	Genes whose primary function is to control the rate of synthesis of the products of other genes.
Release Factors	Specific proteins involved in the reading of genetic stop signals for protein synthesis.
Renaturation	The return of a protein or nucleic acid from a denatured state to its "native" configuration.
Repair Synthesis	Enzymatic excision and replacement of regions of damaged DNA. Repair of thymine dimers by uv irradiation is best understood example.
Replicating Fork	Y-shaped region of chromosome that is a growing point in DNA replication.
Replicating Forms (RF)	The structure of a nucleic acid at the time of its replication—the term most frequently used to refer to double-